

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1157	MSH AND MOUSE	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/07/13 07:53
L2	229	MSH AND MOUSE and mismatch	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/07/13 07:53
L3	2	dmsh2-9	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/07/13 07:53
L4	1	msh2-9	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/07/13 07:53
L5	0	msh adj 2-9	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/07/13 07:53
L6	0	msh near 2-9	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/07/13 07:54
L7	0	dmsh near 2-9	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/07/13 07:54
L8	0	dmsh near 2-	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/07/13 07:54
L9	104	msh near 2-	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/07/13 07:54
L10	471	msh and ATCC	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/07/13 07:55
L11	374	msh and ATCC and mouse	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2006/07/13 07:55

Day : Thursday  
Date: 7/13/2006

Time: 07:48:32

**PALM INTRANET**

## Continuity Information for 09/884877

### Parent Data

09884877

is a continuation in part of 09147712

is a national stage entry of PCT/EP95/02980 International Filing Date: 07/26/1995

### Child Data

10365312 is a division of 09884877

[Appln Info](#)[Contents](#)[Petition Info](#)[Atty/Agent Info](#)[Continuity/Reexam](#)[Foreign Data](#)

Search Another: Application#

or Patent#

PCT /  /

or PG PUBS #

Attorney Docket #

Bar Code #

To go back use Back button on your browser toolbar.

Back to [PALM](#) | [ASSIGNMENT](#) | [OASIS](#) | [Home page](#)

**PALM INTRANET**GDP  
in this caseDay : Thursday  
Date: 7/13/2006

Time: 07:48:36

**Application Number Information**Application Number: **10/365312****Assignments**Examiner Number: **77509 / WOITACH, JOSEPH**Filing or 371(c) Date: **02/12/2003**Group Art Unit: **1632****IFW IMAGE**Effective Date: **02/12/2003**

Class/Subclass:

**800/018.000**Application Received: **02/13/2003**Lost Case: **NO**

Waiting for Response

Pat. Num./Pub. Num: **/20030221208**

Interference Number:

Desc.

Issue Date: **00/00/0000**Unmatched Petition: **NO****Mail Non Final**Date of Abandonment: **00/00/0000**

L&amp;R Code: Secrecy Code:1

Attorney Docket Number: **065691-0297**Third Level Review: **NO**Secrecy Order: **NO**Status: **41 /NON FINAL ACTION MAILED**Status Date: **04/04/2006**Confirmation Number: **8806**Oral Hearing: **NO**Title of Invention: **HOMOLOGOUS RECOMBINATION IN MISMATCH REPAIR  
INACTIVATED EUKARYOTIC CELLS**

Bar Code	PALM Location	Location Date	Charge to Loc	Charge to Name	Employee Name	Location
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Appln  
Info[Contents](#)[Petition Info](#)[Atty/Agent Info](#)[Continuity/Reexam](#)[Foreign Data](#)

Search Another: Application#

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Attorney Docket #

Bar Code #

To go back use Back button on your browser toolbar.

Back to [PALM](#) | [ASSIGNMENT](#) | [OASIS](#) | [Home page](#)

ODP present

10/16/5312

Atty. Dkt. No. 033730-0103

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

**Claims 1-18. (Cancelled)**

19. (New) A method for stably incorporating through homologous recombination a donor DNA molecule into the genome of a mammalian recipient cell that has a mismatch repair deficiency phenotype, comprising transforming the recipient cell having a mismatch repair deficiency phenotype with a donor DNA molecule that is obtained from a donor cell, wherein the donor DNA molecule is stably integrated into the genome of the recipient cell through homologous recombination with a homologous recipient DNA molecule, and wherein the sequence of the donor DNA molecule is not identical with the sequence of the homologous recipient DNA molecule.

20. (New) The method of claim 19, wherein the nucleotide sequence of the donor DNA molecule diverges from the nucleotide sequence of the homologous DNA molecule in the recipient cell by an amount that would prevent homologous recombination in the absence of the mismatch repair deficiency phenotype.

21. (New) The method of claim 19, wherein the nucleotide sequence of the donor DNA molecule diverges from the nucleotide sequence of the homologous DNA molecule in the recipient cell by about 0.6% to about 5%.

22. (New) The method of claim 19, wherein the nucleotide sequence of the donor DNA molecule diverges from the nucleotide sequence of the homologous DNA molecule in the recipient cell by about 0.6% to about 30% in the region where homologous recombination can take place.

23. (New) The method of claim 19, wherein the mammalian recipient cell is an embryonic stem cell or a germ line cell.

24. (New) The method of claim 19, wherein the mammalian recipient cell is obtained from a cell line that is cultured *in vitro*.

25. (New) The method of claim 19, wherein the mammalian recipient cell is obtained from an organ of a mammal.

26. (New) The method of claim 19, wherein at least one of the nucleotide base or base pairs in the donor DNA is modified *in vitro* prior to transformation.

27. (New) The method of claim 26, wherein the modification is a point mutation, an insertion of base pairs, or a deletion of base pairs from the donor DNA molecule, and wherein the modified donor DNA molecule diverges from the nucleotide sequence of the homologous DNA molecule in the recipient cell by about 0.6% to about 5%.

28. (New) The method of claim 26, wherein the modification is a point mutation, an insertion of base pairs, or a deletion of base pairs from the donor DNA molecule, and wherein the modified donor DNA molecule diverges from the nucleotide sequence of the homologous DNA molecule in the recipient cell by about 0.6% to about 30% in the region where homologous recombination can take place.

29. (New) The method of claim 19, wherein the donor DNA molecule is a chromosomal DNA fragment that is inserted into a YAC or cosmid vector.

30. (New) The method of claim 19, wherein the donor DNA molecule is a double-stranded oligonucleotide 10-100 bases in length, and wherein the nucleotide sequence of the donor DNA molecule diverges from the nucleotide sequence of the homologous DNA molecule in the recipient cell by at least one base pair, but no more than 5% of all base pairs.

31. (New) The method of claim 19, wherein the donor DNA molecule is a single-stranded oligonucleotide 10-100 bases in length, and wherein the nucleotide sequence of the donor DNA molecule diverges from the nucleotide sequence of the homologous DNA molecule in the recipient cell by at least one base, but no more than 5% of all bases.

32. (New) The method of claim 19, wherein the donor DNA molecule comprises a selectable marker gene flanked by two sequences, wherein one flanking sequence has at least 95% sequence identity to the corresponding sequence of the recipient DNA molecule and the other flanking sequence comprises a repetitive sequence.

33. (New) The method of claim 32, wherein the repetitive sequence is a long interspersed element (LINE) or a short interspersed element (SINE).

34. (New) The method of claim 19, further comprising inserting the mammalian recipient cell into a blastocoel, implanting the blastocoel into a womb of a female host animal to make the female animal pregnant, and carrying the pregnancy to term to obtain a viable transgenic animal, wherein the mammalian recipient cell is a stem cell.

35. (New) A transgenic animal made by the method of claim 34.

36. (New) The method of claim 34, wherein the nucleotide sequence of the donor DNA molecule diverges from the nucleotide sequence of the homologous DNA molecule in the recipient cell by an amount that would prevent homologous recombination in the absence of the mismatch repair deficiency phenotype.

37. (New) The method of claim 34, wherein the nucleotide sequence of the donor DNA molecule diverges from the nucleotide sequence of the homologous DNA molecule in the mammalian recipient cell by about 0.6% to about 5%.

38. (New) The method of claim 34, wherein the nucleotide sequence of the donor DNA molecule diverges from the nucleotide sequence of the homologous DNA molecule in the mammalian recipient cell by about 0.6% to about 30% in the region where homologous recombination can take place.

39. (New) The method of claim 34, wherein the stem cell is obtained from a cell line that is cultured *in vitro*.

40. (New) The method of claim 34, wherein the mammalian recipient cell is obtained from an organ of a mammal.

Day : Thursday

Date: 7/13/2006

Time: 07:49:10

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## Inventor Information for 09/884877

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[Appln Info](#)[Contents](#)[Petition Info](#)[Atty/Agent Info](#)[Continuity/Reexam](#)[Foreign F](#)Search Another: Application#   or Patent#  PCT /  /   or PG PUBS #  Attorney Docket #  Bar Code #  

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Back to [PALM](#) | [ASSIGNMENT](#) | [OASIS](#) | [Home page](#)

Day : Thursday

Date: 7/13/2006

Time: 07:49:14

**PALM INTRANET****Inventor Name Search Result**

Your Search was:

Last Name = TE RIELE

First Name = HENRICUS

Application#	Patent#	Status	Date Filed	Title	Inventor Name
<u>09884877</u>	Not Issued	77	06/20/2001	Homologous recombination in mismatch repair inactivated eukaryotic cells	TE RIELE, HENRICUS PETRUS JOSEPH
<u>10365312</u>	Not Issued	41	02/12/2003	Homologous recombination in mismatch repair inactivated eukaryotic cells	TE RIELE, HENRICUS PETRUS JOSEPH
<u>09147712</u>	Not Issued	161	02/23/1999	HOMOLOGOUS RECOMBINATION IN MISMATCH REPAIR ICACTIVATED EUOKARYOTIC CELLS	TE RIELE, HENRICUS PETRUS JOSEPH

**Inventor Search Completed: No Records to Display.**

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Back to [PALM](#) | [ASSIGNMENT](#) | [OASIS](#) | [Home page](#)